

A¹ cont.
apparatus, the ink-jet head is provided in a head holder such that the nozzles of the ink-jet head are opposed to the recording medium, and the head holder is mounted on a carriage, scanning being performed in a direction perpendicular to the direction in which the recording medium (sometimes referred to herein as a medium to be recorded) is conveyed.--

Please replace the paragraph beginning at page 2, line 24, with the following rewritten paragraph:

A²
--In this head tip constructed as described above, the elongated grooves 102 are filled with ink from the ink supply port 112. When a predetermined driving electric field is caused to act on the side walls 103 of a predetermined groove 102 through the electrodes 105, the side walls 103 undergo deformation and the volume of the predetermined groove 102 changes, whereby ink in the groove 102 is ejected from the nozzle opening 117.--

Please replace the paragraph beginning at page 5, line 1, with the following rewritten paragraph:

A³
--According to a third aspect of the present invention, the head tip of the first aspect of the present invention is characterized in that the border portion is of a net-like construction.--

Please replace the paragraph beginning at page 5, line 4, with the following rewritten paragraph:

A⁴

--According to a fourth aspect of the present invention, the head tip of the first aspect of the present invention is characterized in that the border portion includes a plate-like construction situated substantially at the center of the border portion and narrower than the longitudinal dimension of the border portion.--

Please replace the paragraph beginning at page 5, line 9, with the following rewritten paragraph:

A⁵

--According to the fifth aspect of the present invention, the head tip of the first aspect of the present invention is characterized in that the base plate is formed of a piezoelectric ceramic plate in which grooves are formed to thereby define the chamber, and communication of the chamber with the common ink chamber is effected through an opening at one longitudinal end of the chamber and on the opposite side of the base plate.--

Please replace the paragraph beginning at page 5, line 16, with the following rewritten paragraph:

A⁶

--According to a sixth aspect of the present invention, the head tip of the first aspect of the present invention is characterized in that the side walls are formed

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A⁶ cont.

of a piezoelectric ceramic and are arranged on the base plate at predetermined intervals to define the chamber between the side walls, and the common ink chamber is defined on the base plate, the chamber and the common ink chamber communicate with each other at one longitudinal end of the chamber.--

Please replace the paragraph beginning at page 8, line 17, with the following rewritten paragraph:

A⁷

--First, the head tip 11 will be described in detail. As shown in Figs. 2A, 2B, 3A, and 3B, in a piezoelectric ceramic plate 16 constituting the head tip 11, chambers 17 consisting of a plurality of elongated grooves are arranged side by side, the chambers 17 being separated from each other by side walls 18. One end portion in the longitudinal direction of each chamber 17 extends to one end surface of the piezoelectric ceramic plate 16, and the other end portion thereof does not extend to the other end surface, with its depth gradually decreasing. Longitudinally extending electrodes 19 for driving electric field application are formed on the opening-side surfaces of the side walls 18 of each chamber 17.--

Pl ase replac the paragraph beginning at page 10, line 2,
with th following rewritt n paragraph:

A⁸

--A border portion 30 where the chambers 17 of the piezoelectric ceramic plate 16 communicate with the common ink chamber 21 of the ink chamber plate 20 is provided with a resistance structure 31 which creates flow passage resistance in the ink passing through the border portion 30. In the illustrated embodiment, the resistance structure 31 is a flat plate with through-holes. The resistance structure 31 creates flow passage resistance in the ink passing through the border portion 30 to enhance the hermeticity of the chambers 17, thereby reducing the convergence time for attenuation of the pressure generated as a result of repeated reflection of sound pressure inside the chambers 17 after the stopping of the oscillation of the side walls 18 after ink ejection.--

Please replace the paragraph beginning at page 16, line 15,
with the following rewritten paragraph:

A⁹

--As shown in the drawings, the resistance structure 31A of this embodiment consists of a plate-like member narrower than the longitudinal dimension of the border portions 30 between the chambers 17 and the common ink chamber 21. This resistance structure 31A is similar to that of Embodiment 1 described above except that it is provided

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substantially at the longitudinal center of the border portions 30 so that the chambers 17 and the common ink chamber 21 may communicate with each other at the longitudinal end portions side of the border portions 30.--

IN THE CLAIMS:

Kindly cancel claims 1-6 and replace them with the following new claims 7-15:

Sub B1
7. A head tip for an ink jet printer, comprising: a base plate; a plurality of side walls provided on the base plate to define a plurality of elongated ink chambers therebetween; a nozzle plate provided at a first longitudinal end of the base plate and having nozzle openings in correspondence with the elongated ink chambers; electrodes formed on the side walls of the elongated ink chambers so that application of a driving voltage to electrodes of a respective elongated ink chamber deforms the side walls and causes ink in the elongated ink chamber to be ejected through a corresponding nozzle opening; an ink chamber plate attached to the base plate and having a common ink chamber communicating with the plurality of elongated ink chambers at a second longitudinal end of the base plate opposite the first longitudinal end; and a border portion member disposed at a

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